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ABSTRACT

An alternative account of the Old English verb-complement word order and the change from OV to VO is offered, based on an analysis of 16 Old English texts. Evidence is provided that the change does not involve abrupt reanalysis but rather synchronic competition between two grammars, beginning in the Old English period and continuing into Middle English. Background assumptions and terminology are outlined first. The standard analysis of Old English and the change from OV to VO is then described, and three predictions of the standard analysis are presented and shown to be unfulfilled. It is shown that (1) clauses unambiguously derived from a VO grammar are used productively during the Old English period, before the change is supposed to have taken place, (2) clauses unambiguously derived from an OV grammar are used productively during the Middle English period, after the change is supposed to have taken place, and (3) the increase in VO surface word order during the Old English period and the trigger for change at that period's end can not be linked directly to an increased rate of either postposition rules or verb-second constraint. The proposed hypothesis of grammatical competition accounting for the word order variation is then presented. Contains 41 references and an appendix of abbreviations. (MSE)

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OLD ENGLISH VERB-COMPLEMENT WORD ORDER AND THE CHANGE FROM OV TO VO*

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1. Introduction

The change from object-verb (OV) word order to verb-object (VO) word order is one of the most striking changes in the history of the English language. According to most generative accounts, Old English is an OV language, with optional rules of postposition and some form of the verb-second (V2) constraint. Modern English, of course, is a VO language and exhibits only remnants of V2.[1] The change from OV to VO is usually described as an abrupt grammatical reanalysis occurring at the end of the Old English period.[2]

This paper offers an alternative account of Old English verb-complement word order and the change from OV to VO. Evidence is provided that the change does not involve abrupt reanalysis but rather

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[1] For example, Modern English shows residual V2 effects in questions and in clauses with preposed negative polarity items:

(i) What should I do?

(ii) Never have I seen such a sight.

[2] There are three stages in the history of English: Old English (700-1100), Middle English (1100-1500), and Modern English (1500-present).

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synchronic competition between two grammars, which begins in the Old English period and continues during the Middle English period.

The paper is organized as follows. Section 2 presents background assumptions and terminology. Section 3 describes in more detail the standard analysis of Old English and the change from OV to VO. Section 4 presents three predictions of the standard analysis and shows that they are not fulfilled. And Section 5 proposes an analysis of grammatical competition to account for the variation in verb-complement word order during the Old and Middle English periods.

The proposed analysis is based upon an investigation of data collected from sixteen Old English texts; for sampling techniques and information about the texts included in the database, see Appendix B of Pintzuk (1993). Old English texts are cited according to the system specified in Mitchell, Ball, and Cameron (1975, 1979); the abbreviations used are listed in the Appendix.

2. Background assumptions and terminology

The analyses presented in this paper use a generative approach to describe syntactic structure and word order, the Principles and Parameters framework outlined in Chomsky (1981, 1986) and related work. In particular, it is assumed that the base component of the grammar generates underlying structure and word order that are modified by syntactic movement, deriving surface structure and word order; both structure and movement are constrained by universal principles. The differences between languages, and between different stages of the same language, are described in terms of parameters; for example, one difference between Modern German and Modern English is the setting of the parameter that determines the order of verbs and their complements. For ease of exposition, I make the following three assumptions about the syntax of Old English: (i) there are only two functional categories, Infl and Comp; (ii) the underlying order of heads and their complements can vary; and (iii) only finite verbs move from their underlying position to functional heads. Nothing crucial rests on these assumptions or on the choice of this particular framework: the syntactic differences between OV and VO languages and grammars are robust and can be expressed in any framework.

The term 'auxiliary verb' is used for expository convenience to refer to those verbs that take infinitival or participial complements in Old English.[3] The terms 'verb raising' and 'verb projection raising' are used to describe the permutation of auxiliary verbs and their infinitival or participial complements in otherwise verb-final languages.[4] The term 'heavy constituent' is used for Old English PPs, non-pronominal NPs, polysyllabic adverbs, and non-finite verbs, to distinguish them from 'light constituents', i.e. pronouns, particles, and monosyllabic adverbs.[5] The terms 'OV' and 'VO' are used to refer to either underlying or surface word order and structure; the use will be made clear by the context. The term 'Infl-medial' is used for structures where Infl, the head of IP, precedes its complement; the term 'Infl-final' is used for structures where Infl follows its complement.

It is assumed that Old English is a V2 language, although the precise formulation of the V2 constraint for Old English is still a matter of some debate (see, for example, van Kemenade 1994, Pintzuk 1993); and that finite verbs obligatorily move to Infl to receive inflection. Because leftward verb movement to a functional head can distort the underlying word order in both main and subordinate clauses, it is necessary to abstract away from this effect in order to focus upon the order of verbs and their complements. The structural ambiguity is illustrated below: clauses like (1a), with the finite main verb in clause-medial position, can be derived either by leftward movement of the verb, as in (1b), or by rightward movement of the post-verbal constituent, as in (1c).

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[3] Allen 1975 shows that Old English does not have a separate word class of auxiliary verbs. But see Warner 1993 for features of a subset of my Old English auxiliaries that distinguish them from lexical verbs.

[4] See den Besten and Edmondson 1983, Evers 1975, 1981, Haegeman 1994, Haegeman and van Riemsdijk 1986, Kroch and Santorini 1991, among others, for formal analyses of verb (projection) raising in Germanic languages. No position is taken here on the derived structures of verb raising and verb projection raising. These processes are grouped with postposition in Section 3 simply on the basis of derived word order.

[5] It is shown in Pintzuk 1994 that Old English pronouns and adverbs behave differently from heavy constituents: they can be syntactic clitics, moving leftward to attach to maximal projections and/or heads.

(1) a. þe god worhte þurh hine
which God wrought through him
'... which God wrought through him ...'
(ÆLS 31.7)

b. Leftward verb movement:
þe god worhte$_i$ þurh hine t_i

c. Rightward movement of the PP:
þe god t_i worhte [$_{PP}$ þurh hine]$_i$

To avoid this ambiguity, the data that will be considered here consist mainly of clauses with finite auxiliary verbs and non-finite main verbs; in these clauses the position of the auxiliary verb may be affected by V2, but the non-finite main verb remains in its base-generated position.[6]

3. The standard analysis of Old English

In this section the standard analysis of Old English, as proposed or assumed by van Kemenade (1987), Koopman (1990), Lightfoot (1991), and Stockwell and Minkova (1991), among others, is considered in more detail. According to this analysis, Old English has underlying OV structure, some form of V2, and postposition rules moving various constituents rightward beyond the main verb of the clause. All surface word orders are derived from a uniform base by optional movement rules, as illustrated in the examples below.[7] In (2), the underlying and surface order of the main verb and its complement are the same; in (3), VO surface word order is derived from OV underlying word order by postposition of the NP.

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[6] Higgins 1991 suggests that Old English infinitives may move to the Infl position of the embedded non-finite clause; see Pintzuk 1991 for criticism of this analysis.

[7] Since the focus of this paper is the order of main verbs and their complements, the traces of topics and verbs affected by V2 are not shown in the examples.

(2) OV surface word order:

he ne mæg his agene aberan
he not may his own support
'He may not support his own.'

(CP 52.2)

(3) VO surface word order:

þu hafast t_i gecoren $[_{NP}$ þone wer$]_i$
you have chosen the man
'You have chosen the man.'

(ApT 23.1)

There is strong evidence in favor of this analysis, which forms the basis of most of the current work in Old English syntax within a Principles and Parameters framework. Evidence for underlying OV word order is provided by clauses in which main verbs follow their complements and auxiliary verbs follow the main verbs, as in (4). Evidence for the postposition of NPs and PPs and for verb (projection) raising is provided by clauses in which the finite auxiliary is preceded by two or more heavy constituents and followed by an NP, as in (5), a PP, as in (6), a non-finite main verb, as in (7), or a projection of the non-finite main verb, as in (8). Note that none of the clauses in (4) through (8) can be analyzed as V2 clauses, since the finite auxiliary is preceded by more than one heavy constituent.

(4) Evidence for underlying OV word order:

him þær se gionga cyning þæs oferfæreldes forwiernan mehte
him there the young king the crossing prevent could
'... the young king could prevent him from crossing there.'

(Or 44.19-20)

(5) Evidence for NP postposition:

þæt ænig mon t_i atellan mæge [$_{NP}$ ealne þone demm]$_i$
that any man relate can all the misery
'... that any man can relate all the misery ...'
(Or 52.6-7)

(6) Evidence for PP postposition:

her Cenwalh t_i adrifen wæs [$_{PP}$ from Pendan cyninge]$_i$
in-this-year Cenwalh driven-out was by Penda king
'In this year, Cenwalh was driven out by King Penda.'
(ChronA 26.19 (645))

(7) Evidence for verb raising:

Wilfrid eac swilce of breotan ealonde t_i wes [$_V$ onsend]$_i$
Wilfred also from Britain land was sent
'Wilfred was also sent from Britain.'
(Chad 162.27-164.28)

(8) Evidence for verb projection raising:

hwær ænegu þeod æt oþerre t_i mehte [$_{VP}$ frið begietan]$_i$
where any people from other might peace obtain
'... where any people might obtain peace from another ...'
(Or 31.14-15)

In anticipation of the discussion in Section 4.1, it should be pointed out that an OV grammar with optional rules of V2 and postposition is quite powerful and can derive many different surface word orders, some in more than one way. Because both leftward movement of the finite verb and rightward movement of NPs, PPs, verbs, and verb projections are permitted, the main verb can precede or follow its complement, and the auxiliary can precede or follow the main verb. This is illustrated in (9), where S = subject, XP = NP/PP

complement, Aux = auxiliary verb, Vf = finite main verb, V = non-finite main verb.

(9)	Surface word order	Derivation
a.	S XP Vf	reflects underlying word order
b.	S Vf_i XP t_i	V2
c.	S t_i Vf XP_i	postposition
d.	S XP V Aux	reflects underlying word order
e.	S XP t_i Aux V_i	verb raising
f.	S Aux_i XP V t_i	V2
g.	S t_i Aux $[XP\ V]_i$	verb projection raising
h.	S t_i V Aux XP_i	postposition
i.	S Aux_i t_j V t_i XP_j	V2 + postposition
j.	S t_i t_j Aux V_j XP_i	verb raising + postposition

Given this analysis of Old English syntax, the following scenario is invoked to describe the change from OV to VO. During the Old English period, VO surface word order gradually increases in frequency at the expense of OV. Toward the end of the period, when the surface word order is overwhelmingly VO, language learners abduce a new grammar with underlying VO structure and word order on the basis of the VO primary linguistic data. During the transition period, when two grammatical systems are in use by the two different generations of speakers, clauses like (10a) are produced and understood under both the old and the new grammars, but with different analyses: under the old system, they are derived from OV structure by postposition, as shown in (10b); under the new system, they are derived from VO structure with

no movement, as shown in (10c). One point deserves emphasis here. To the linguist, (10a) is structurally ambiguous and can be derived from one of two different underlying structures. But according to the abrupt reanalysis view of syntactic change, children abduce either the old OV grammar or the new VO grammar but not both, and the clause has a single underlying word order within each system.

(10) a. þu hafast gecoren þone wer
you have chosen the man
'You have chosen the man.'
(ApT 23.1)

b. Old OV grammar with postposition:
þu hafast t_i gecoren $[_{NP}$ þone wer$]_i$

c. New VO grammar:
þu hafast $[_{VP}$ gecoren þone wer$]$

The account presented above is both plausible and appealing. It depicts a period of word order variation generated by a uniform grammar, followed by the abrupt resetting of the parameter that controls the underlying order of verbs and their complements. And it offers an explanation for the change: the primary linguistic data used by children for language acquisition have changed, and therefore the grammar that is abduced differs in one or more parameter settings from the grammar of the previous generation. Despite its plausibility and appeal, however, it will be demonstrated in Section 4 that the predictions made by this analysis are not correct, and therefore that the analysis cannot be maintained.

4. Predictions of the standard analysis

The standard analysis of Old English and of the change from OV to VO presented above makes three predictions that can be tested on historical data. First, clauses unambiguously derived from the new VO grammar are not used during the Old English period, before the change. Second, clauses unambiguously derived from the old OV grammar are not used

during the Middle English period, after the change. And third, the frequency of VO surface word order increases during the Old English period, to reach near categorical status in the primary linguistic data used by language learners. These three predictions are discussed in Sections 4.1 through 4.3.

4.1. Prediction #1: no VO clauses in Old English

According to the first prediction made by the standard analysis, we will not find Old English clauses that are unambiguously derived from the new VO grammar. Contra this prediction, it will be demonstrated below that clauses with underlying VO structure are used productively during the Old English period.

Although (9) above illustrates that an OV grammar with optional rules of V2 and postposition can derive many different surface word orders, there is one clause type that constitutes evidence for underlying VO word order. The relevant clauses are those with light constituents -- particles, pronominal objects, and monosyllabic adverbs. In Old English clauses with auxiliary verbs, these constituents appear both before and after the non-finite main verb, as shown in (11).

(11) a. Particle before the main verb:

and hi næfre siððan ut-brecan ne magon
and they never afterwards out-burst not may
'And afterwards they may never burst out ...'
(ÆCHom ii.174.3)

b. Particle before the main verb:

& woldon hig utdragan
and (they) would them out-drag
'... and they would drag them out.'
(ChronE 215.6 (1083))

c. Particle after the main verb:

he wolde adræfan ut anne æþeling
he would drive out a prince
'... he would drive out a prince ...'
(ChronB (T) 82.18-19 (755))

However, the position of these constituents varies only in clauses like (11b) and (11c), with the auxiliary verb before the main verb. In clauses like (11a), with the auxiliary verb after the main verb, particles, pronouns, and monosyllabic adverbs -- unlike heavier constituents -- invariably appear before rather than after the main verb. The distribution is shown in Table 1.[8]

Table 1
Distribution of particles, pronouns, and monosyllabic adverbs in Old English main clauses with auxiliary verbs

Clause Type	Before Main Verb		After Main Verb		Total
	N	%	N	%	
Main verb + aux	90	100.0%	0	0.0%	90
Aux + Main verb	260	94.5%	15	5.5%	275

It is obvious from the order of the main verb and the auxiliary that clauses like (11a) are OV in underlying structure, with the light constituent base-generated in pre-verbal position. The fact that light constituents never appear post-verbally in OV clauses indicates that these constituents cannot be postposed, probably because of a heaviness constraint on postposition. But if particles, pronouns, and monosyllabic adverbs do not postpose, then clauses like (11c) must be derived from underlying VO structure, as shown in (12); and these clauses therefore constitute evidence for the use of VO structure during the Old English period.

[8] The data for Table 1 consist of main clauses with particles from the database of Hiltunen 1983, supplemented by main clauses with pronominal objects and main clauses with monosyllabic adverbs.

(12) he wolde [VP adræfan ut anne æþeling]
he would drive out a prince

The position of the other constituents in the 15 clauses with post-verbal particles, pronouns, and monosyllabic adverbs lends further support to this analysis. In 14 of the 15 clauses, the auxiliary and main verb are adjacent, with all complements and adjuncts appearing after the main verb, as in (11c) above. The remaining clause, given in (13), has only an adverb between the auxiliary and the main verb.

(13) and man ne mihte swa ðeah macian hi healfe up
and one not could nevertheless put them half up
'... and nevertheless, one couldn't put half of them up.'
(ÆLS 21.434)

It must be concluded that the first prediction of the standard analysis is incorrect: VO structure is used productively, although perhaps at a low frequency, during the Old English period, before the change from OV to VO is supposed to have taken place.

4.2. Prediction #2: no OV clauses in Middle English

According to the second prediction made by the standard analysis, we will not find clauses in Middle English that are unambiguously derived from the old OV grammar. Contra this prediction, it will be demonstrated below that clauses with underlyingly OV structure are used productively during the Middle English period.

A number of studies demonstrate that OV surface word order, at least, is used in Middle English texts. Kroch and Taylor (1994) examine the position of NP complements in subordinate clauses with auxiliary verbs, where the order of the main verb and its complements is not affected by verb movement to Infl, in Early Middle English prose texts. In two West Midlands texts, they find a total of 23 out of 88 (26%) NPs in pre-verbal position between the auxiliary verb and the non-finite main verb; in three Southeast texts, they find a total of 31 out of 108 (29%) NPs in pre-verbal position. Stockwell and Minkova

(1991), citing Morohovskiy (1980), state that in 7.6% of the 14th to 16th century London texts, the complement appears before the main verb in clauses with auxiliary verbs. And Foster and van der Wurff (1993, 1994) show that OV surface word order is used productively throughout the Middle English period, although at a low frequency. Of course, we can't be sure how OV surface word order is derived in Middle English: it could reflect underlying structure and word order, as shown in (14a), or else be derived from a VO base by leftward movement, as shown in (14b).[9]

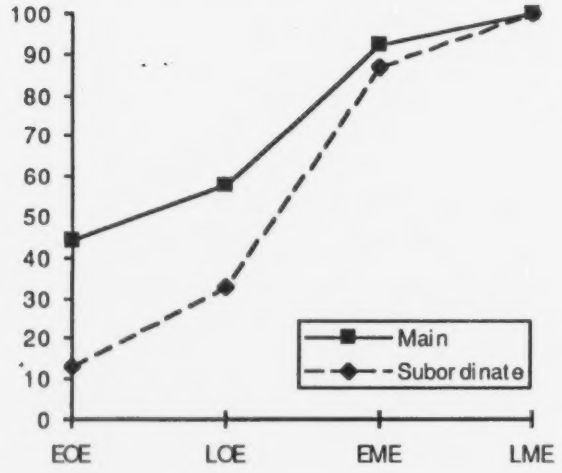
(14) a. Underlying OV structure:
S XP Vf

b. Underlying VO structure with leftward movement:
S XP_i Vf t_i

Clearly, the simple existence of clauses with OV surface word order is not sufficient evidence for OV underlying structure. But one clause type does provide evidence for OV structure in Middle English: clauses with pre-verbal particles. Since particles do not scramble leftward, pre-verbal particles directly reflect the underlying word order. As shown in Figure 1 (= Hiltunen 1983: 111, his Figure 2), particles appear before the main verb at a low but significant frequency throughout the Middle English period, in main clauses as well as in subordinate clauses, indicating that OV structure is used in Middle English.

[9] See Kroch and Taylor 1994 for speculations that the West Midlands dialect is mainly VO in underlying structure, while the Southeast dialect exhibits synchronic competition between OV and VO grammars.

Figure 1
Frequency of verb...particle word order in Early Old English (EOE), Late Old English (LOE), Early Middle English (EME), and Late Middle English (LME).



It is interesting to note that the discourse function of OV surface word order seems to be the same in Middle English as in Old English: Foster and van der Wurff (1994) demonstrate that pre-verbal position in Middle English is associated with inferable and evoked entities in Middle English; similarly, Linson (1993) shows that pre-verbal position in Old English is associated with entities that have been previously mentioned in the discourse.

It must be concluded that the second prediction of the standard analysis is incorrect: OV structure is used productively, although perhaps at a low frequency, throughout the Middle English period, after the change from OV to VO is supposed to have occurred.

4.3. Prediction #3: increase in VO surface word order

According to the standard analysis, the frequency of VO surface word order increased at the expense of OV surface word order during the Old English period, until it became nearly categorical. This section discusses the change in surface word order, the possible sources of the VO increase, and the role that the increase may have played in the change from OV to VO.

As a simple description of Old English word order, it is certainly true that VO surface word order was more common at the end of the period than in the earlier stages. Hiltunen (1983) shows that verb-particle word order was used more frequently in Late Old English than in Early Old English, both in main clauses and in subordinate clauses (see Figure 1 above); and Bean (1983) shows that OV word order decreased in frequency from the early to the late sections of the *Anglo-Saxon Chronicle*.

However, given the analyses presented above, there are at least four different ways to derive VO surface word order in Old English: (i) from OV structure, by leftward movement of the finite main verb, as in (15a); (ii) from OV structure, by postposition of the complement, as in (15b); (iii) from OV structure, by a combination of verb movement and postposition, as in (15c); and (iv) as a reflex of underlying VO structure, as in (15d) and (15e).

(15) a. Verb movement:
S Vf_i [$_{VP}$ XP t_i]

b. Postposition:
S [$_{VP}$ t_i Vf] XP_i

c. Verb movement + postposition:
S Aux_i [$_{VP}$ t_j V t_i] XP_j

d. Underlying VO structure:
S [$_{VP}$ Vf XP]

e. Underlying VO structure:
S Aux [$_{VP}$ V XP]

Researchers differ on the source of the increase in VO surface word order during the Old English period. Most scholars (e.g. Aitchison 1979, Canale 1978, van Kemenade 1987, Stockwell 1977) attribute it to an increase in the rate of postposition. Although the rate of postposition over time has not been measured for Old English, Santorini (1993) looked at the rates of NP and PP postposition in the history of Yiddish, a language that has undergone syntactic changes similar to English -- in particular, Yiddish changed from Infl-final to Infl-medial and from OV to VO. Santorini found that while the rate of postposition in structurally unambiguous clauses is highly variable from text to text, it does not increase over time. The data are shown in Table 2 below (= Santorini 1993: 275, Table 5). It is reasonable to conclude that the rate of postposition was not a factor in the OV to VO change in Yiddish, and it remains to be demonstrated that an increase in the rate of postposition played a role in the OV to VO change in the history of English.

Table 2
Rates of NP and PP postposing in Yiddish

	NP Postposing			PP Postposing		
Time period	Postposed	Not Postposed	Rate	Postposed	Not Postposed	Rate
1400-1489	1	12	8%	9	12	43%
1490-1539	7	19	27%	13	16	45%
1540-1589	7	24	23%	52	21	71%
1590-1639	10	40	20%	39	23	63%
1640-1689	4	19	17%	17	30	36%
1690-1739	1	5	17%	6	3	67%
1740-1789	1	2	33%	8	7	53%
1790-1839	0	1	0%	1	1	50%

In fact Lightfoot (1991) states that there is no evidence for an increase in the rate of postposition during the Old English period; he suggests instead that the source of the increase in VO surface word order in the primary linguistic data is an increase in the use of V2 in main

clauses. Lightfoot shows that indicators of OV structure[10] are robust in languages like Dutch and German, but weak or non-existent in Old English. He suggests that an increase in VO surface word order derived by V2, coupled with the absence of evidence for OV structure, triggers the change from OV to VO.

In apparent support of Lightfoot's hypothesis, an increase in the frequency of clauses with the finite verb in second position is well documented: Pintzuk (1991), for example, demonstrates that for clauses with auxiliary verbs, the frequency of V2 in both main and subordinate clauses increases over the course of the Old English period.[11] But while V2 derives VO surface word order in clauses with finite main verbs and topicalized subjects, as in (16), it has no effect on the order of verbs and their complements in clauses with topicalized objects, as in (17), or in clauses with non-finite main verbs, as in (18).

(16) Philippus & Herodes todældun Lysiam
Philip and Herod divided Lycia
'Philip and Herod divided Lycia.'
(ChronA 6.4 (12))

(17) Of Iotum comon Cantware & Wihtware
From Jutes came people-of-Kent and people-of-Wight
'From the Jutes came the people of Kent and the people of Wight.'
(ChronA 12.13 (449))

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10 Such indicators include (i) the clause-final position of separable particles, negation, and sentential adverbs in main clauses with finite main verbs, and (ii) the pre-verbal position of objects, separable particles, negation, and sentential adverbs in main clauses with modal verbs/perfective *have* and non-finite main verbs.

11 In Pintzuk 1991, 1993, IPs in Old English are either head-medial or head-final, with obligatory movement of the finite verb to Infl; V2 is analyzed as leftward movement to Infl in Infl-medial clauses. According to this analysis, an increase in the frequency of V2 does not reflect an increase in the use of an optional leftward movement rule, but rather an increase in the use of an Infl-medial grammar.

(18) Swa sceal geong guma gode gewyrcean
So shall young men good-things perform
'Young men shall perform good deeds in this way.'
(Beo 20)

Lightfoot cites Klein (1974) for evidence that Dutch language learners pay attention to Dutch clauses analogous to (18), and Lightfoot (1991: 62, 64) suggests that the order of object and verb in clauses like (18) was accessible to Old English language learners. If the rate of postposition remained constant during the Old English period, with the frequency of clauses like (18) also remaining constant, it seems plausible that these clauses could have been used as evidence for OV structure by children learning Old English. With such a robust indicator of OV structure still in existence at the end of the Old English period, there is no clear support for the hypothesis that the increased frequency of clauses like (16) could have triggered the change from OV to VO.

We can see that although the frequency of VO surface word order does increase during the Old English period, arguments that link this increased frequency and the OV to VO change to an increase in the rate of V2 and/or postposition are not convincing.

5. Synchronic competition between OV and VO grammars

Section 4 presented three types of evidence to contradict the standard account of the change from OV to VO word order at the end of the Old English period. First, clauses unambiguously derived from a VO grammar are used productively during the Old English period, before the change is supposed to have taken place. Second, clauses unambiguously derived from an OV grammar are used productively during the Middle English period, after the change is supposed to have taken place. And third, the increase in VO surface word order during the Old English period and the trigger for change at the end of the period cannot be directly linked to an increase in the rate of either postposition rules or V2.

The evidence points to a different picture of the change from OV to VO. Instead of a uniform grammatical system during the Old English

period, with word order variation derived by optional movement rules, there are two competing grammars, one underlyingly OV, the other underlyingly VO. The VO grammar emerges early in the Old English period, and competes with the old OV grammar throughout the Old and Middle English periods, until the old system dies out. Thus the variation in surface word order in both Old and Middle English is at least partially the result of the use of two different grammatical systems, rather than one system with optional rules. And the increase in VO surface word order is at least partially the result of an increase in the use of the new VO grammar, rather than simply an increase in the frequency of use of movement rules.

This analysis replicates the analysis of grammatical competition in languages as diverse as Old French (Kroch 1989), Middle Spanish (Fontana 1993), Old English (Pintzuk 1991, 1993), Middle English (Kroch 1989), Early Yiddish (Santorini 1989, 1993), and Ancient Greek (Taylor 1994). Changes of this type that have been analyzed quantitatively follow an S-shaped curve, as shown in Figure 2: the change starts slowly, accelerates in the middle of the period, and then tapers off to completion.

It should be pointed out that in apparent contradiction to this analysis, many scholars (Gorrell 1895, Kellner 1892, Kohonen 1978, Lightfoot 1991, Mitchell 1985, Stockwell and Minkova 1991) have noticed an abrupt decrease in the frequency of verb-final word order in subordinate clauses at the earliest stages of Middle English, an observation that seems to refute the claim of competing grammars during the Middle English period. But if the change in the underlying order of verbs and their complements is a change of the type shown in Figure 2 above, and if the accelerating middle section of the curve coincides with the end of the Old English period, then a low frequency of OV word order in the Middle English data is only to be expected. Furthermore, it must be emphasized once again that surface word order does not always reflect underlying structure, and that it is necessary to abstract away from verb movement to study verb-complement word order. If we assume that the change from Infl-final to Infl-medial structure was complete early in the Middle English period (Pintzuk

Figure 2
S-shaped curve of syntactic change

1991), then subordinate clauses with finite main verbs will necessarily exhibit VO surface word order, with the verb in clause-medial Infl regardless of the underlying verb-complement word order. As discussed in Section 4.2, in subordinate clauses with auxiliary verbs in Early Middle English documents, Kroch and Taylor (1994) found 26% pre-verbal NPs in West Midlands texts and 29% pre-verbal NPs in Southeastern texts. These frequencies indicate that the order of verbs and their complements in Early Middle English did not significantly differ from the order in Old English, and that the grammars used by speakers during the two stages were much more similar than has previously been suggested.

APPENDIX

ABBREVIATIONS

ÆCHom = Thorpe, Benjamin (ed.) (1844) *The Homilies of the Anglo-Saxon Church*. London: Ælfric Society. Reprinted 1971, New York: Johnson. [volume.page.line]

ÆLS = Skeat, Walter W. (ed.) (1881-1900) *Ælfric's Lives of Saints*. The Early English Text Society, Vols. 76, 82, 94, 114. London: Trübner. [life.line]

ApT = Thorpe, Benjamin (ed.) (1834) *The Anglo-Saxon Version of the Story of Apollonius of Tyre*. London: John and Arthur Arch. [page.line]

Beo = Klaeber, Fr. (ed.) (1950) *Beowulf and the Fight at Finnsburg*. Third Edition. Lexington, Mass.: D. C. Heath. [line]

Chad = Vleeskruyer, Rudolf (ed.) (1953) *The Life of St. Chad: An Old English Homily*. Amsterdam: North-Holland. [page.line]

ChronA = Plummer, Charles (ed.) (1892) *Two of the Saxon Chronicles Parallel*. Oxford: Clarendon Press. [page.line (year)]

ChronB = Thorpe, Benjamin (ed.) (1861) *The Anglo-Saxon Chronicle, According to the Several Original Authorities*. London: Her Majesty's Stationery Office. Reprinted 1964, Kraus Reprint Ltd. [page.line (year)]

ChronE = Plummer, Charles (ed.) (1892) *Two of the Saxon Chronicles Parallel*. Oxford: Clarendon Press. [page.line (year)]

CP = Sweet, Henry (ed.) (1871) *King Alfred's West-Saxon Version of Gregory's Pastoral Care*. The Early English Text Society, Vols. 45, 50. London: Trübner. [page.line]

Or = Bately, Janet M. (ed.) (1980) *The Old English Orosius*. The Early English Text Society, SS, Vol. 6. London: Oxford University Press. [page.line]

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